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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,005	09/15/2003	Pai-Fu Hung	250114-1160	1752

24504 7590 08/20/2007  
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EXAMINER
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HO, HUY C

ART UNIT	PAPER NUMBER
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2617

MAIL DATE	DELIVERY MODE
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08/20/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Advisory Action</b> <b>Before the Filing of an Appeal Brief</b>	Application No. 10/663,005	Applicant(s) HUNG ET AL.	
	Examiner Huy C. Ho	Art Unit 2617	

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 14 July 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
- Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

#### AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
- (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ They raise the issue of new matter (see NOTE below);
- (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).


4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL -324).
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s). *request for reconsideration*
7. ☒ For purposes of appeal, the ~~proposed amendment~~(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
- The status of the claim(s) is (or will be) as follows:
- Claim(s) allowed: \_\_\_\_\_.
- Claim(s) objected to: \_\_\_\_\_.
- Claim(s) rejected: 1-18.
- Claim(s) withdrawn from consideration: \_\_\_\_\_.

#### AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

#### REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: see the next page.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_
13. ☐ Other: \_\_\_\_\_.

  
 DUC M. NGUYEN  
 SUPERVISORY PATENT EXAMINER  
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Claim 1, Ofek discloses a WLAN (Wireless Local Area Network) device (figure 1), having a smart antenna system (section [5]), comprising:

- a plurality of WLAN transceiver modules (sections [28]); and
- a plurality of directional antennas (section [20]), respectively installed on said WLAN transceiver modules (sections [27] -[28]), wherein said directional antennas are equally spaced apart in an annular array (figure 6, number 160, sections [226]-[229]), and each of said directional antennas is responsible for the communication of a plurality of users in a cell (the abstract, sections [5] -[8], [20], [29]). Ofek does not specifically show a one-to-one correspondence, however, it is very noticeable that Ofek discusses a wireless communication system comprises a plurality of directional antenna sectors, at least one receiving and on transmitting controller, each directional antenna sector is coupled to a selected one of the receiving/transmitting controller for receiving/transmitting signals. Another word, this configuration suggests one directional antenna sector coupled to one corresponding transceiver (refer to Ofek, sections [28]). In Nguyen 2003/0181221, Nguyen discloses a one-to-one correspondence as discussing an access point in a WLAN, comprises a baseband chip capable of adapting various radio frequency (RF) units, each RF unit in turns includes a plurality of RF sub units connected in a daisy-chain manner, each RF sub unit is also connected to at least one antenna. The access point thus includes a number of antennas that, together with the RF units and the baseband chip, form a smart antenna (refer to Nguyen, the abstract, figure 3, sections [3], [22]).

Since both Ofek and Nguyen teach a smart antenna system that uses directional antennas, it would be obvious to one skilled in the art to modify Ofek teaching, and having the one-to-one correspondence as taught by Nguyen, to improve the wireless communication system as discussed by Nguyen (see section [2]-[3]).

Claim 7, A WLAN device having a smart antenna system, comprising:

- a plurality of WLAN transceiver modules; and
- a plurality of array antennas, respectively installed on said WLAN transceiver modules, wherein each of said array antennas is composed of a plurality of omni-directional antennas (sections [18], [74]), and the radiation patterns of said array antennas are controlled to be directional radiation patterns (sections [76], [78], [86]), and each of said array antennas is responsible for the communication of a plurality of users in two opposite cells.

Ofek does not specifically show a one-to-one correspondence, however, it is very noticeable that Ofek discusses a wireless communication system comprises a plurality of directional antenna sectors, at least one receiving and on transmitting controller, each directional antenna sector is coupled to a selected one of the receiving/transmitting controller for receiving/transmitting signals. Another word, this configuration suggests one directional antenna sector coupled to one corresponding transceiver (refer to Ofek, sections [28]). In Nguyen 2003/0181221, Nguyen discusses an access point in a WLAN, comprises a baseband chip capable of adapting various radio frequency (RF) units, each RF unit in turns includes a plurality of RF sub units connected in a daisy-chain manner, each RF sub unit is also connected to at least one antenna. The access point thus includes a number of antennas that, together with the RF units and the baseband chip, form a smart antenna (refer to Nguyen, the abstract, figure 3, sections [3], [22]).

Since both Ofek and Nguyen teach a smart antenna system that uses directional antennas, it would be obvious to one skilled in the art to modify Ofek teaching, and having the one-to-one correspondence as taught by Nguyen, to improve the wireless communication system as discussed by Nguyen (see section [2]-[3]).

Claim 14, A smart antenna system, comprising:

- a plurality of directional antennas, respectively installed on a plurality of WLAN transceiver modules, wherein said directional antennas are equally spaced apart in an annular array (figure 6, number 160, sections [226] -[229]), and each of said directional antennas is responsible for the communication of a plurality of users in a cell.

Ofek does not specifically show a one-to-one correspondence, however, it is very noticeable that Ofek discusses a wireless communication system comprises a plurality of directional antenna sectors, at least one receiving and on transmitting controller, each directional antenna sector is coupled to a selected one of the receiving/transmitting controller for receiving/transmitting signals. Another word, this configuration suggests one directional antenna sector coupled to one corresponding transceiver (refer to Ofek, sections [28]). In Nguyen 2003/0181221, Nguyen discusses an access point in a WLAN, comprises a baseband chip capable of adapting various radio frequency (RF) units, each RF unit in turns includes a plurality of RF sub units connected in a daisy-chain manner, each RF sub unit is also connected to at least one antenna. The access point thus includes a number of antennas that, together with the RF units and the baseband chip, form a smart antenna (refer to Nguyen, the abstract, figure 3, sections [3], [22]).

Since both Ofek and Nguyen teach a smart antenna system that uses directional antennas, it would be obvious to one skilled in the art to modify Ofek teaching, and having the one-to-one correspondence as taught by Nguyen, to improve the wireless communication system as discussed by Nguyen (see section [2]-[3]).